International Journal of Surgery Case Reports 4 (2013) 127–129

International Journal of Surgery Case Reports

journal homepage: www.elsevier.com/locate/ijscr

Obesity as a defense mechanism

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ARTICLE INFO

Article history:
Received 30 May 2012
Received in revised form
12 September 2012
Accepted 5 October 2012
Available online 26 October 2012

Keywords:
Psychiatry
Post-traumatic stress disorder
Obesity
Panic attacks
Somatization
Bariatric surgery

ABSTRACT

INTRODUCTION: As the rate of obesity and bariatric surgery rise, various psychosocial etiologies contributing to obesity are being explored, and it is not uncommon to discover that a patient has been a victim of past abuse.
PRESENTATION OF CASE: A 37-year-old female was hospitalized for intractable nausea and vomiting following a laparoscopic Roux-en-Y gastric bypass performed a month and a half prior. After ruling out all medical etiologies, psychiatry was consulted due to a history of panic attacks, and to evaluate for a psychosomatic etiology.
DISCUSSION: During the initial consultation, it was elicited that the patient had been the victim of a date rape as a teen, which resulted in dramatic weight gain and obesity. Following a comprehensive medical workup, brief psychodynamic psychotherapy, and the initiation of pharmacotherapy, the patient had a resolution of her symptoms, and at a 2 month follow-up, remained asymptomatic.
CONCLUSION: Prior to surgery, patients should be questioned about any history of abuse by utilizing a structured diagnostic questionnaire, such as the Weight and Lifestyle Inventory (WALI). To prevent minimization, individuals with a history of abuse should be screened more thoroughly, and psychiatric involvement should be an intrinsic component of the follow-up care as abused patients may also be more sensitive to complaints as they lose weight. Psychiatric involvement can be a useful adjunctive treatment while medical etiologies are being ruled out, rather than after they have been ruled out.

1. Introduction

Obesity has reached epidemic proportions in the United States, with 66% of adults being overweight (BMI $\geq$ 25 kg/m^2) and nearly 1/3 meeting criteria for obesity (BMI $\geq$ 30 kg/m^2).[1] Upwards of 9% of U.S. health care dollars are spent treating the direct and indirect sequelae of obesity,[2] with no end in sight. The prevalence has been increasing since the 1960s, with a notable increase in the child and adolescent subgroups, whose prevalence has increased rapidly from less than 10% in 1980 to 17% in 2004.[1] It is thought that 40–70% of the variation in obesity can be accounted for by genetic inheritance,[3,4] leaving a significant proportion attributable to environmental, psychosocial, and psychobiological factors.[5]

Among the various psychosocial etiologies contributing to obesity, childhood sexual abuse and trauma is an important factor. As much as 16% of adult men and 25% of adult women in the general population report a history of some form of childhood sexual abuse.[6] Childhood sexual abuse survivors have been found significantly more likely to become obese (42%) in young adulthood than non-abused individuals (28%).[6,7] Interestingly, the obesity in this patient population has been shown to be relatively treatment resistant.[8–10]

For patients resistant to conservative treatment measures, gastric bypass is an attractive and increasingly utilized alternative. Since the 1990s the number of gastric bypass surgeries has increased from 16,000 to roughly 103,000 in 2003, with the percentage of Americans meeting eligibility criteria growing from 2.8% to 5%.[11] As this surgical procedure becomes more prevalent, it is important that health care providers remember to carefully assess the prospective patients for any predictors of a negative outcome, such as a failure to lose or maintain weight loss, or medical or psychiatric complications.

Sexually abused patients may be more likely to experience such complications. In a retrospective chart review, Clark et al. demonstrated that 27% of recipients of gastric bypass had a history of childhood sexual abuse. Clark went on to show that 73% of patients undergoing psychiatric hospitalization following gastric bypass had a history of sexual abuse.[8] Although sexually abused patients may experience mental health exacerbations following surgery, there has not been any significant difference found in the post-operative weight loss, indicating that such patients are good candidates for this aggressive treatment.[12]

We report the case of a patient who had been sexually assaulted as a teen and underwent gastric bypass surgery. The patient subsequently developed intractable nausea and vomiting without

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2210-2612
http://dx.doi.org/10.1016/j.ijscr.2012.10.011

adequate medical explanation, illustrating the importance of a thorough preoperative psychiatric assessment and treatment. Psychiatry was ultimately involved in her care, but it took a number of steps events before that occurred.

2. Presentation of case

LB was a 37-year-old married, morbidly obese, African-American female who was evaluated by psychiatry on the surgical inpatient service for a complaint of "panic attacks." Concurrently, she was suffering from intractable nausea and vomiting 30 days after a successful gastric bypass surgery.

Initially following gastric bypass, LB had experienced an uneventful recovery and was tolerating a liquid diet well. At approximately 30 days post-op, LB advanced her diet to soft solids and, at this time, started to develop postprandial nausea and vomiting. Her vomiting worsened and became severe enough to necessitate emergency department visits on post-op days 34, 40, and 48, when her surgeon recommended that she be admitted to the hospital for further workup. LB weighed 357 lbs (162.3 kg, BMI of 53.5), down from her initial weight of 426 lbs (193.6 kg, BMI of 63.8). In an attempt to identify the etiology of her symptoms, she underwent a pelvic and abdominal CT scan, a right upper quadrant ultrasound, and an esophagogastroduodenoscopy (EGD), all of which were negative. She also reported being compliant with her surgical follow-up care and diet.

LB had a past medical history of morbid obesity, obstructive sleep apnea, degenerative joint disease, and chronic low back pain, and she had seen a psychiatrist one time only as part of her clearance for surgery. While taking a social history, she described herself as being a very active child and stated that she had excelled in school. However, she mentioned that in her teenage years she had been the victim of date rape.

Psychiatry was consulted on hospital day number two for "panic attacks." Upon examination, LB appeared fatigued and slightly disheveled, and acknowledged feeling depressed. Initially, LB's thought content was fixated on her persistent vomiting, however, with some encouragement, she spoke extensively about the date rape and its impact on her.

LB admitted to having been raped by a friend when she was 16. When asked how she coped with the experience, LB stated that she "held it in and tried to forget about it". Following the rape, she ate increasing amounts of food, gained weight, decreased her previously high activity level, and became more "closed off" toward family and friends. She had not discussed this event with a clinician until the preoperative psychiatric assessment for her gastric bypass.

While discussing the event, she was calm, but reserved and limited in her emotional responsiveness. She did admit to some hopelessness, helplessness, and desperation regarding her persistent vomiting. She noted that she had developed an aversion to the smell of food. These cognitions led to the physiologic response of vomiting, palpitations, anxiety, and panic. In conjunction to the cognitive symptoms of depression, she had an inability to initiate and maintain sleep.

To address the depressive symptoms and insomnia, mirtazapine 15 mg orally at night was started. Mirtazapine has the additional benefit of antagonizing 5-HT_3 receptors, adding anti-emetic and anti-nausea properties. LB reported improved sleep with this medication, and she received two follow up consultations involving psychoeducation about somatization and panic, as well as insight into the dynamics behind her symptoms. She was able to appreciate the psychological impact of the rape on the development of her obesity. Food may have initially been used as comfort or distraction. It mollified or "self medicated" the significant anger that she had at her offender and the excess weight helped to bind her angry affect. On a deeper, more subconscious level, the weight may have functioned to ward off any other sexual advances. In LB's own words, it was a "shield."

LB was discharged on hospital day four with arrangements for outpatient counseling and a prescription for the antidepressant agent. At a two-month follow up, the patient reported that the nausea and vomiting had resolved, she was participating in therapy, and reported feeling much better. It is unlikely that her symptoms resolved spontaneously because they abated only after collaborative psychiatric involvement, which was requested after diagnostic tests failed to identify a specific cause. Ultimately, her symptoms improved after she was examined in more depth than ER visits allow, and permitted to discuss the origins of her weight gain.

3. Discussion

LB's case demonstrates the relationship between sexual abuse and development of obesity. Based on our psychiatric assessment, we hypothesize that LB may have initially gained weight as a defense to ward off further sexual advances. Her experience as a victim of date rape may have planted a subconscious drive to be less sexually desirable, and in turn, she may have found comfort in eating and the subsequent transformation of her body. Through the therapeutic process, LB came to recognize that the weight she had put on was a "protective shield." Following the gastric bypass, LB lost both her "shield" and her ability to cope through excessive eating. We believe loss of these defense mechanisms led to her development of somatic complaints. Abuse, in particular sexual abuse, has been previously linked to development of somatic complaints.[13] In one study, over 80% of patients with somatization disorder reported some type of sexual abuse.[14] A systematic review of 4640 patients by Paras et al., showed a significant association between a history of sexual abuse and lifetime diagnosis of functional gastrointestinal disorders.[15]

The results of this case are especially interesting to interpret in the context of the findings of Clark et al. This study found that 73% of patients undergoing psychiatric hospitalization following gastric bypass have a history of sexual abuse.[8] Perhaps some of the reason for this high percentage is that these patients have more invested in the weight than other patients. As these patients undergo weight loss, they may experience significant psychological distress. This could lead to a "symptom substitution" phenomenon, and subsequent psychiatric distress.

Currently, there is a lack of distinct guidelines for preoperative psychiatric assessment for bypass surgery. Due to the high percentage of people in the general population that are victims of childhood sexual abuse, we suggest administering a pre-operative screening to each prospective candidate for bariatric surgery. Two options are the Childhood Trauma Questionnaire (CTQ) and the Weight and Lifestyle Inventory (WALI). The self-report CTQ evaluates for physical and emotional abuse, emotional neglect, sexual abuse, and physical neglect.[16,17] Another alternative is the WALI, which is designed to obtain information about weight and diet history, social history, and includes questions about past physical or sexual abuse.[18] The WALI has the added benefit of being free and readily available, and is a valuable tool to identify various stages of depression and undisclosed abuse. Our psychiatry department is considering adding the WALI as a mandatory prerequisite to be completed prior to having a bariatric surgery evaluation, which many surgical departments now require. It would be advisable to follow post operatively any patient who is identified as having been a victim of sexual abuse prior to weight gain, which did not happen in this case. Standardizing this practice would also reduce the effects of a patient minimizing her symptoms, because a

follow-up consultation would automatically be triggered, regardless of severity. The patient did receive the care she needed, but there was delay in receiving it because no intrinsic system for psychiatric aftercare had been in place. Had the system been in place, this patient would have been seen much earlier. Furthermore, appropriate psychiatric interventions may limit unnecessary medical workups and decrease overall costs, although a primary psychiatric etiology should never be considered until an exhaustive medical workout, perhaps including surgical re-exploration, has been performed.

4. Conclusion

Gastric bypass has been shown to be a proven tool for weight loss in a treatment resistant population. However, patients with a history of sexual abuse should be assured adequate preoperative and postoperative psychiatric intervention, as they may be more sensitive to mental and physical complaints as they lose weight. Having systems in place to assure psychiatric involvement can only augment and accelerate the patient's recovery, especially in the case of an adverse event while medical etiologies are being ruled out.

Conflict of interest statement

None.

Funding

None.

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Authors' contributions

Justin Faden D.O. and Robin Hanson D.O. co-wrote the paper. Douglas Leonard D.O. interviewed the patient and collected data. John O'Reardon M.D. reviewed and revised the paper, and encouraged its publication into a surgical journal.

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